

Section -1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier: E-400 / E-400X Top Coat (Part A)
 - Product Name: E-400 / E-400X Tough Epoxy Coating / Part A
 - Product reference: E-400 / E-400X Epoxy Coating Compound

1.2. Product Use:
 - Epoxy Coating Compound

1.3. Manufacturer's Name:
CAGE Code: 14439
Flamemaster Corp.
Chem Seal Division
13576 Desmond Street
Pacoima, CA 91333 – USA

1.3.1 Suppliers Name (if not manufacturer)

Technical Contact:
Flamemaster Corp.
Tel: 818-890-1401
Fax: 818-890-6001
www.flamemaster.com

1.4. Emergency Telephone:
 Chemtrec – Chemtrec International
 800-424-9300 (North America)
 703-527-3887 (Outside North America))

Specification: AS1129		EPOXY COATING / TOP COAT		PART A
NSN:	8030-01-067-7586	8030-00-009-5032		
	E-400 T/C HAZE GREY PINT	E400/E400X T/C WHITE QUART KIT		

Section -2. HAZARD (S) IDENTIFICATION

OSHA/HCS STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CLASSIFICATION OF THE MIXTURE:

FLAMMABLE LIQUID - CATEGORY 2

ASPIRATION HAZARD - CATEGORY 1

ACUTE TOXICITY, ORAL - CATEGORY 4

ACUTE TOXICITY (INHALATION) - CATEGORY 4

CARCINOGENICITY - Category 2

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

SKIN SENSITIZATION - CATEGORY 1

GERM CELL MUTAGENICITY-CATEGORY 2

TOXIC TO REPRODUCTION - CATEGORY 2

SPECIFIC TARGET ORGAN TOXICITY-SINGLE EXPOSURE - (NARCOTIC EFFECTS) - CATEGORY 3

SPECIFIC TARGET ORGAN TOXICITY-REPEAT EXPOSURE -CATEGORY 2

REPRODUCTIVE TOXICITY, EFFECTS ON OR VIA LACTATION

AQUATIC (CHRONIC) - CATEGORY 4

GHS LABEL REQUIREMENTS:

HAZARD PICTOGRAMS:



SIGNAL WORD : DANGER

HAZARD STATEMENTS:

HIGHLY FLAMMABLE LIQUID AND VAPOR - H225

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304

HARMFUL IF SWALLOWED - H302

HARMFUL IF INHALED - H332

SUSPECTED OF CAUSING CANCER - H351

CAUSES SKIN IRRITATION - H315

CAUSES SERIOUS EYE IRRITATION - H319

MAY CAUSE AN ALLERGIC SKIN REACTION - H317

SUSPECTED OF CAUSING GENETIC DEFECTS - H341

SUSPECTED OF DAMAGING FERTILITY. SUSPECTED OF DAMAGING THE UNBORN CHILD - H361fd

MAY CAUSE DROWSINESS OR DIZZINESS - H336

MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373

MAY CAUSE HARM TO BREAST-FED CHILDREN - H362

MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE - H413

In the event of sanding, grinding, or abrading:

H372 Causes damage to organs through prolonged or repeated exposure.

Hazards Not Otherwise Classified (HNOC):

Sanding and grinding dust may be harmful if inhaled. Sanding and grinding dust may form combustible concentrations in air.

Emits toxic fumes when heated.

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PRECAUTIONARY STATEMENTS:

- P101+P102+P103: If medical advice is needed, have product container or label at hand. Keep out of reach of children.
- Read label before use
- P202: Do not handle until all safety precautions have been read and understood
- P210: Keep away from heat/sparks/open flames and hot surfaces-No Smoking
- P240:Ground/bond container and receiving equipment
- P261+P262+P263+P264:Avoid breathing dust/fumes/gas/mist/vapours/spray.Do not get in eyes , on skin, or on clothing. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling.
- P270+P271+P273: Do not eat drink or smoke when using this product. Use only outdoors or in a well ventilated area. Avoid release to the environment.
- P281+P280: Use personal protective equipment as required. Wear protective gloves/ protective clothing/ eye protection/face protection
- P301+P310+P331: If swallowed: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.
- P305+P351+P338+P315: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses,if present and easy to do. Continue rinsing. Get immediate medical advice attention.
- P304+P340+P314: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell
- P342+P340+P315: If experiencing respiratory symptoms: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
- P302+P352: If on skin (or in hair) : Wash with plenty of soap and water. If skin irritation occurs seek medical attention
- P306+P361: If on clothing: Remove/ take off immediately all contaminated clothing
- P402+P403+P404: Store in a dry place. Store in a well ventilated space. Store in a closed container.
- P233+P234+P235: Keep container tightly closed. Keep only in original container. Keep cool.

SUPPLEMENTAL LABEL ELEMENTS:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of concentrations above recommended limits causes headaches, drowsiness and nausea and could lead to unconsciousness or possibly death.

irritating to the mucous membranes and may cause the skin to become sensitized.

Avoid any contact with skin or clothing and wash thoroughly after handling.

Emits toxic fumes when heated.

HAZARDS NOT OTHERWISE CLASSIFIED:

Prolonged or repeated exposure may dry skin and / or cause skin irritation.

Sanding and grinding dust may be harmful if inhaled. Sanding and grinding dust may form combustible concentrations in air.

In the event of sanding, grinding, or abrading:

H372 Causes damage to organs through prolonged or repeated exposure.

Section -3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of organic compounds

For the hazards of the composition, (SDS see Section 2).

% BY WEIGHT IN PRODUCT-	HAZARDOUS INGREDIENT	CAS#-
<70%	Bisphenol A Epoxy Resin	67924-34-9
FLAMMABLE LIQUID AND VAPOR - H226		
CAUSES SKIN IRRITATION - H315		
MAY CAUSE AN ALLERGIC SKIN REACTION - H317		
CAUSES SERIOUS EYE IRRITATION - H319		
MAY CAUSE DROWSINESS OR DIZZINESS - H336		

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% BY WEIGHT IN PRODUCT-	HAZARDOUS INGREDIENT	CAS#-
<70%	Propylene Glycol Monomethyl Ether	107-98-2
FLAMMABLE LIQUID AND VAPOR - H226 CAUSES SKIN IRRITATION - H315 MAY CAUSE AN ALLERGIC SKIN REACTION - H317 CAUSES SERIOUS EYE IRRITATION - H319 MAY CAUSE DROWSINESS OR DIZZINESS - H336		
<25%	Isobutyl Acetate	110-19-0
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225 MAY CAUSE DROWSINESS OR DIZZINESS - H336 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H412		
<25#	Ethylene Glycol Monopropyl Ether	2807-30-9
FLAMMABLE LIQUID AND VAPOR - H226 HARMFUL IN CONTACT WITH SKIN - H312 CAUSES SERIOUS EYE IRRITATION - H319		
<25%	Solvent Naphtha	64742-89-8
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304 CAUSES SKIN IRRITATION - H315 MAY CAUSE DROWSINESS OR DIZZINESS - H336 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD - H361 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373 TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H411		
<25%	Heptane	142-82-5
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304 CAUSES SKIN IRRITATION - H315 MAY CAUSE DROWSINESS OR DIZZINESS - H336 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS - H410		
<25%	Cyclohexanone	108-94-1
FLAMMABLE LIQUID AND VAPOR - H226 HARMFUL IF SWALLOWED - H302 HARMFUL IN CONTACT WITH SKIN - H312 HARMFUL IF INHALED - H332 CAUSES SKIN IRRITATION - H315 CAUSES SERIOUS EYE DAMAGE - H318		

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Toluene

<5%

108-88-3

CAUSES SKIN IRRITATION - H315
HIGHLY FLAMMABLE LIQUID AND VAPOR - H225
SUSPECTED OF DAMAGING THE UNBORN CHILD - H361d
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373
MAY CAUSE DROWSINESS OR DIZZINESS - H336
MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304

Glycol Ether EB

<10%

111-76-2

Combustible Liquid
Causes Skin Irritation
Causes Eye Irritation
May Cause Respiratory Irritation

Methyl Isobutyl Ketone

<10%

108-10-1

Highly Flammable Liquid and Vapor
Harmful If Inhaled
Causes Serious Eye Irritation
May Cause Respiratory Irritation

Section -4. FIRST-AID MEASURES

General: When in doubt or symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air, if breathing has stopped, administer artificial respiration. Give nothing by mouth, seek immediate medical attention.

Eye contact: Check for and remove any contact lenses. Irrigate with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek immediate medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use aromatic solvents, thinners or petroleum products.

Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

May be fatal if swallowed or vomited and enters lungs and/or airways. Never give anything by mouth to an unconscious person.

Section -5. FIRE-FIGHTING MEASURES

Extinguishing agents

Recommended: Universal resistant foam, CO₂, water, powder.

Agents to avoid: None known

Attention

Promptly remove all persons in the event of a fire from the fire area. If safe to do so, remove all containers from fire area as well.

Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.

Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.

Do not weld, flame cut or expose to extreme heat or ignition sources, empty containers which have contained flammable products.

Do not allow run-off from fire fighting to enter drains or water courses.

Emits toxic fumes when heated.

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HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:

- Carbon Dioxide
- Carbon Monoxide
- Carbon Oxides
- Halogenated Compounds
- Airborn Solids and Liquid Particulates
- Nitrogen Oxides
- Nitrogen Oxides can react with water vapors to form corrosive nitric acid
- Unidentified Organic and Inorganic Compounds
- Toxic Fumes
- Smoke
- Phenolic Compounds
- Sulfur Oxides
- Other Hazardous Materials

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

Section -6. ACCIDENTAL RELEASE MEASURES

Eliminate sources of ignition, ventilate the area. Avoid breathing vapors by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.

Collect spill with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.

Clean-up with a detergent/ water mix ; avoid use of aromatic solvents. If the product enters drains or watercourses, inform authority with jurisdiction in accordance with state / local regulations.

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

Section -7. HANDLING AND STORAGE

7.1 Handling:

No smoking, eating and drinking during handling.

Avoid exposure during pregnancy/while nursing.

Keep containers tightly closed. Prior to movement containers which are opened should be carefully resealed.

Avoid skin and eye contact. Avoid inhalation in case of exposure to vapor and spray mist.

Handle and open containers with care to avoid spilling of contents. Never use pressure to empty; container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

Preparation may charge electrostatically; always use grounding/ bonding/ earthing leads when transferring contents of containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air, and avoid vapor concentration higher than the Occupational Exposure Limits.

Use in areas from which local sources of ignition have been excluded. Electrical equipment including lighting should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools are recommended.

7.2 Storage:

Observe label precautions. Store between 32/F and 95/F (0/C and 35/C) in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight. For flash points below 23 °C store in an area constructed to the appropriate standard

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Engineering measures:

Avoid the inhalation of vapors, spray mist and particulates. Achieve by local exhaust ventilation providing good general extraction as to keep air-borne concentration below the Occupational Exposure Limits (OEL).

If local / area ventilation is not sufficient to comply with OEL, suitable (NIOSH) respiratory protection to be provided. Always provide suitable (NIOSH) respiratory protection when sanding, grinding or otherwise abrading cured material.

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8.2 Exposure limits

Work place exposure limits (8 hour)

OSHA	PRODUCT	ACGIH
N/A	Propylene Glycol Monomethyl Ether	50 ppm 8 hours
150 ppm	Isobutyl Acetate	150 ppm
200 ppm	Toluene	20 ppm
25 ppm	Glycol Ether EB	20 ppm
500 ppm	Solvent Naphtha	N/A
500 ppm	Heptane	400 ppm
N/A	Cyclohexanone	20 ppm
50 ppm	Methyl Isobutyl Ketone	20 ppm

8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protection, used to control exposure to hazardous substances must be selected to meet the requirements of OSHA Regulations.

Respiratory protection :

Appropriate respiratory protection equipment should be selected according to the type of contaminants, following regulatory (OSHA / NIOSH) and manufacturers instructions including proper fitting of devices.

Hand protection :

For prolonged or repeated contact, recommend gloves type: polyvinyl alcohol, nitrile rubber, latex rubber (some people may exhibit sensitivity to Latex). Barrier creams may help to protect exposed areas of the skin. However, they should not be applied post exposure.

Eye protection :

Use safety glasses with side shields to protect against splashes. Face shields may also be worn.

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Skin protection :

Protective clothing made of antistatic and fire resistant fibers. All parts of the body should be washed after contact. Use good hygiene and industrial practices, keep working clothes clean.

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|---|---|
| <ul style="list-style-type: none">• Physical state at: 68 ° F (20 ° C) Liquid• Flash point: 40 Deg. F ---5 Deg. C Method: TCC• Specific gravity at: 68 ° F (20 ° C) N/A• Vapor Density: N/A• Lower Explosive Limit-N/A• Upper Explosive Limit-N/A• Miscibility in water at 20 ° C: Slight• VOC : N/A | <ul style="list-style-type: none">• Ph : N/A• Volatile % by volume: N/A• Vapor pressure at: 68 ° F (20 ° C) N/A• Color: Clear Solution• Appearance: Viscous Fluid• Odor: Alcohol/Ketone Odor• Boiling Point: N/A• Material Supports Combustion : Yes |
|---|---|

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see SDS section 7). In case of combustion, may produce hazardous decomposition products such as :

HAZARDOUS DECOMPOSITION PRODUCTS INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:

- | | |
|---|--|
| <ul style="list-style-type: none">• Carbon Dioxide• Carbon Monoxide• Carbon Oxides• Halogenated Compounds• Airborn Solids and Liquid Particulates• Nitrogen Oxides• Nitrogen Oxides can react with water vapors to form corrosive nitric acid | <ul style="list-style-type: none">• Unidentified Organic and Inorganic Compounds<ul style="list-style-type: none">• Toxic Fumes• Smoke• Phenolic Compounds• Sulfur Oxides• Other Hazardous Materials |
|---|--|

In case of inhalation of decomposition products released in a fire, symptoms may be delayed. Exposed persons may need to be kept under medical surveillance for at least 48 hours.

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. See (SDS Sections 3 and 15) for details.

Exposure to component solvents vapors at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms and signs of overexposure include headache, dizziness, fatigue, muscular weakness, drowsiness, reduced fetal weight, increase in fetal deaths, skeletal malformations, and in extreme cases loss of consciousness

Repeated or prolonged contact with the preparation may cause Defatting of the skin resulting in non-allergic dermatitis and absorption through the skin.

The liquid splashed in the eyes causes serious eye irritation and damage.

Irritating to mouth, throat and stomach. Ingestion causes reduced fetal weight, increased fetal deaths and skeletal malformations

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ACUTE TOXICITY:

ENDPOINT	SPECIES	PRODUCT	DOSE	EXPOSURE
		Bisphenol A Epoxy Resin		
LD50 Dermal	Rat		>2,000 mg/kg	-
LD50 ORAL	Rat		>2,000 mg/kg	-
		Propylene Glycol Monomethyl Ether		
LD50 ORAL	Rat		4016 mg/kg	-
LC50 Inhalation Vapor	Rat		>7000 ppm	-
LD50 Dermal	Rat		>2000 ppm	-
		Isobutyl Acetate		
LD50 ORAL	Rat		13413 mg/kg	-
LD50 Dermal	Rabbit		>17400 mg/kg	-
		Ethylene Glycol Monopropyl Ether		
LD50 Oral	Rat		3089 mg/kg	-
LC50 Inhalation Vapor	Mouse		1530 ppm	-
LD50 Dermal	Rabbit		1337 mg/kg	-
		Solvent Naphtha		
LD50 ORAL	Rat		>5.00 mg/kg	-
LC50 Inhalation Vapor	Rat		>20 mg/l	-
LD50 Dermal	Rabbit		>2.00 mg/kg	-
		Heptane		
LC50 Inhalation Vapor	Rat		103,000 mg/m ³	4 Hours
		Cyclohexanone		
LD50 ORAL	Rat		1534 mg/kg	-
LC50 Inhalation Vapor	Rat		6.2 mg/l	4 Hours
LD50 Dermal	Rabbit		794-3160 mg/kg	-
		Toluene		
LD50 ORAL	Rat		2600mg/kg	-
LD50 Dermal	Rabbit		12000 mg/kg	-
LC50 Inhalation Vapor	Rat		12.5 mg/l	4 hour

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CORROSION / IRRITATION

PRODUCT	SPECIES	RESULT
Propylene Glycol Monomethyl Ether	Rabbit	Eyes-Non-Irritant
	Rabbit	Skin-Non-Irritant
Ethylene Glycol Monopropyl Ether	Rabbit	Eyes- Irritant
	Rabbit	Skin-Non Irritant
Solvent Naphtha	-	Eyes - Irritant
	-	Skin - Irritant
Cyclohexanone	Rabbit	Serious Eye damage
	Rabbit	Skin - Irritant

Sensitizer:

ROUT OF EXPOSURE	PRODUCT: SPECIES	RESULT
Skin	Propylene Glycol Monomethyl Ether Guinea Pig	Not Sensitizing
	Isobutyl Acetate	Not Sensitizing
Skin	Ethylene Glycol Monopropyl Ether Guinea Pig	Not Sensitizing

CARCINOGENICITY:

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards
 Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards

MUTAGENICITY:

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards
 Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards
 Isobutyl Acetate - Negative
 Cyclohexanone - Laboratory experiments have shown mutagenic effects

TERATOGENICITY:

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards
 Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards

Developmental Effects:

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards
Solvent Naphtha - Suspected of damaging fertility or the Unborn Child

Fertility Effects:

Bisphenol A Epoxy Resin - No Known Significant Effects or Critical Hazards
Propylene Glycol Monomethyl Ether - No Known Significant Effects or Critical Hazards

SPECIFIC TARGET ORGAN TOXICITY-STOT (SINGLE EXPOSURE)

1-methoxy-2-propanol - Category 3 - Narcotic Effects
Solvent Naphtha - Category 3 - Narcotic Effects
Heptane - Category 3 - Narcotic Effects
Cyclohexanone - Acute Inhalation Toxicity - Breathing Difficulties

TARGET ORGANS: BRAIN, BLOOD, KIDNEYS, LUNGS, REPRODUCTIVE SYSTEM, LIVER, HEART, PERIPHERAL NERVOUS SYSTEM, GASTROINTESTINAL TRACT, UPPER RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, NERVOUS SYSTEM, EYE, LENS AND/OR CORNEA

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS - H304
HARMFUL IF SWALLOWED - H302
HARMFUL IF INHALED - H332
SUSPECTED OF CAUSING CANCER - H351
CAUSES SKIN IRRITATION - H315
CAUSES SERIOUS EYE IRRITATION - H319
MAY CAUSE AN ALLERGIC SKIN REACTION - H317
SUSPECTED OF CAUSING GENETIC DEFECTS - H341
SUSPECTED OF DAMAGING FERTILITY. SUSPECTED OF DAMAGING THE UNBORN CHILD - H361fd
MAY CAUSE DROWSINESS OR DIZZINESS - H336
MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE - H373
MAY CAUSE HARM TO BREAST-FED CHILDREN - H362

ASPIRATION HAZARD :

MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS

12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself. Do not allow the product to enter drains or water ways. See (SDS Sections 3 and 15)

Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

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Toxicity :

RESULT	PRODUCT SPECIES	EXPOSURE
	Propylene Glycol Monomethyl Ether	
EgC50 ->1000 - mg/l	Algae	7 days Static
IC50 - >1000mg/l	Bacteria	3 Hours Static
LC50 - 23300 mg/l	Daphnia Magna	48 Hours Static
LC50 ->1000 mg/l	Fish	96 Hours Static
	Isobutyl Acetate	
LC50 - 17mg/l	Oryzias Latipes	96 Hours
EC50 - 25 mg/l	Daphnia Magna	48 Hours
EC50 - 370 mg/l	Pseudokirchneriella Subcapitata	72 Hours
	Ethylene Glycol Monopropyl Ether	
LC50 Static >5000 mg/l	Pimephales Promelas	96 Hours
LC50 Static >5000 mg/l	Daphnia Magna	48 Hours
EC50 Static >100 mg/l	Pseudokirchneriella Subcapitata	72 Hours
	Heptane	
LC50 - 4 mg/l	Carassius Auratus	24 Hours
LC50 - 375 mg/l	Tilapia Mossambica	96 Hours
EC50 - 1.5 mg/L	Daphnia Magna	48 Hours
	Cyclohexanone	
EC50 - 820 mg/l	Daphnia Magna	24 Hours
	Toluene	
LC50 6.26-8.4 mg/l	Rainbow Trout	24 hours
LC50 6.97-8.62 mg/l	Salmon	24 hours
LC50 7.45-8.75 mg/l	Salmon	24 hours
LC50 80 mg/l	Medaka	24 hours
	Glycol Ether EB	
LC50 1575 mg/l	Carp	48 Hours
LC50 1720 mg/l	Daphnia Magna	24 Hours
	Methyl Isobutyl Ketone	
LC50 672 mg/l	Carp	48 Hours
EC50 4280 mg/l	Daphnia Magna	24 Hours

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PERSISTANCE AND DEGRADABILITY:

TEST	PRODUCT PERIOD	RESULT
OECD 301F	Bisphenol A Epoxy Resin 28 DAYS	5%
OECD 301D	Isobutyl Acetate 20 DAYS	81% - Readily Biodegradable

AQUATIC HALF LIFE	PRODUCT PHOTOLYSIS	BIODEGRADABILITY
Fresh water 3.58 days Bisphenol A Epoxy Resin - Not Readily Biodegradable	Bisphenol A Epoxy Resin -	Not Readily

Bioaccumulative Potential :

Product / Ingredient	LogP(ow)	BCF	Potential
Bisphenol A Epoxy Resin	-	31	low
Propylene Glycol Monomethyl Ether	0.43	0.25	low
Heptane			Indication of Bioaccumulation Potential

Toluene Partition Coefficient - 2.65

Mobility in Soil : Not Available

13. DISPOSAL CONSIDERATIONS

Recommended incineration or land fill as hazardous waste per Federal, State and local regulations.
 React with curing agent and dispose of as hazardous waste per Federal, State and local regulations. Recommended incineration or land fill.
 Empty containers and/or liners may contain material residue. Empty contaminated packagings thoroughly. Dispose in accordance with all Federal, State, and local health and environmental regulations.
 Never allow this material, any solutions, or any by-products, as well as any run-off, to come into contact with soil, waterways, wildlife habitats, drains, sewers, and / or the ocean. Avoid release into environment.

14. TRANSPORT INFORMATION

DOT: § 172.101 HAZARDOUS MATERIALS TABLE**UN Number: 1263****Proper Shipping Name: Paint Related Material****Labels: Flammable Liquid**

IATA:

UN Number: 1263

Proper Shipping Name: Paint Related Material

Labels: Flammable Liquid

Hazard Class: 3 Subclass: NO

Packaging Group: II

Passenger Air Packing Instruction : 355

Passenger aircraft: 60 Liter (16 gallon)

Cargo Air Packing Instruction : 366

Cargo aircraft only: 220 Liter (58 gallon)

Hazard Class: 3 Subclass: NO

Packaging Group: II

Limited Quantity: Passenger aircraft: 10 Liter (2.64 Gallons)

Cargo aircraft only: 220 Liter (58 gallon)

Vessel stowage: A

ERG: 128

NMFC 4620 sub.5-CL.60

Schedule B # 3506.91.0000

IMDG:

UN Number: 1263

Proper Shipping Name: Paint Related Material

Label: 3

Hazard Class: 3 Subclass: NO

Packaging Group: II

EMS No: F, E – S, D

15. REGULATORY INFORMATION

US Regulations Federal

chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 (SARA)	Chemical Name	CAS No	Weight %	Threshold limit (Reporting Value)
	MIBK	108-10-1	<10%	unknown
	TOLUENE	108-88-3	<5%	unknown

SARA notifications must remain attached to this SDS. Any copies and /or distribution of this SDS must include all SARA notifications.

All remaining Constituents are non-hazardous per FED-STD-313 All Constituents are listed in TSCA inventory; complete mixture is excluded Per TSCA Par. 710.4 (d) 95 (6) (7) Constituents are not listed in TSCA 12b CORR. LIST

United States: Sara 302/304 (Sara 304 RQ): Not Applicable

Information On Ingredients: None Were Found

Sara 311/312**Classification: Fire Hazard, Immediate (acute) Health Hazard, Delayed (chronic) Health Hazard**

This sds is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.

US Regulations State

Propylene Glycol Monomethyl Ether	Pennsylvania	(RTK)	- Listed
Isobutyl Acetate	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Ethylene Glycol Monopropyl Ether	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Heptane	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Cyclohexanone	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	New Jersey	(RTK)	- Listed
Toluene	California Proposition 65	(RTK)	- Listed
	(Developmental Female)		
	New Jersey	(RTK)	- Listed
	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
Glycol Ether EB	New Jersey	(RTK)	- Listed
	Massachusetts	(RTK)	- Listed
	Pennsylvania	(RTK)	- Listed
	Rhode Island	(RTK)	- Listed

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Methyl Isobutyl Ketone

**California Proposition 65 (RTK) - Listed
(Developmental Female)**

- New Jersey (RTK) - Listed**
- Massachusetts (RTK) - Listed**
- Pennsylvania (RTK) - Listed**
- Rhode Island (RTK) - Listed**

California Prop. 65 : Warning

This product contains a chemical or chemicals known by the state of California to cause cancer, birth defects, or other reproductive harm.

Canada



Class B – Flammable

- TOLUENE
- Glycol Ether EB
- Methyl Isobutyl Ketone
- Bisphenol A Epoxy Resin
- Propylene Glycol Monomethyl Ether



**Class D - Poisonous and Infectious
materials Division 2: Materials Causing
Other Toxic Effects D2A D2B**

- Glycol Ether EB
- Propylene Glycol Monomethyl Ether
- TOLUENE
- Bisphenol A Epoxy Resin

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Listed National Pollutant Release Inventory (NPRI):

- Propylene Glycol Monomethyl Ether
- Toluene

- Glycol Ether EB
- Bisphenol A Epoxy Resin
- Methyl Isobutyl Ketone

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16. OTHER INFORMATION

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Customer and / or end user is responsible for determining PPE

NFPA**HMIS**

Preparer:	Flamemaster / Compliance Rev-A 4/20/2015 Supersedes (conversion)	Revision Notes: A	Conversion to ANSI format
Containers:	plastic jars, metal cans cartridge kits		
Limited Quantity	See SDS Section 14		

Maximum container size 50 Gallons / 190 Liters

Notice to reader:

This SDS is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.

In all cases, the user must determine the applicability of all information and recommendations contained herein as well as the suitability of this product for their own particular needs or purposes.

This product may be hazardous and should always be used with care and discretion. Every effort has been made to describe all known hazards, but this in no way guarantees the above mentioned hazards are the only hazards present.

Flamemaster Corporation, its Affiliates and its Agents, shall in no way be held liable for any damages resulting from handling, using, storing, disposing of, or from contact with this product. User assumes all risk.

End of Safety Data Sheet